USDA-ARS Scientists Present Symposium at Tri-Societies Annual Meeting

On November 7th, Agricultural Research Service scientists from Mandan, ND and the National Soil Erosion Research Laboratory created and presented a symposium "Dynamic Cropping Systems for Soil & Water Conservation" at the 2005 ASA-CSSA-SSSA International Meeting in Salt Lake City, UT. Dynamic cropping systems – defined as a long-term strategy of annual crop sequencing that optimizes crop and soil use options to attain production, economic, and resource conservation goals using ecologically-based management principles – possess an inherent flexibility to adapt to high-risk conditions, and are therefore more sustainable than prevalent cropping systems. The symposium highlighted research results from a dynamic cropping systems project conducted in the U.S. northern Great Plains, and included presentations on crop production, plant diseases, soil water use, soil biology/quality, and potential management applications. The presentation titles (and presenters) were: "Dynamic Cropping Systems for Sustainable Crop Production" (Dr. Donald Tanaka, Soil Scientist),"Dynamic Cropping Systems for Managing Plant Disease Risks" (Dr. Joseph Krupinsky, Plant Pathologist), Dynamic Cropping Systems for Effective Use of Soil Water (Stephen D. Merrill, Soil Scientist), "Dynamic Cropping Systems Influence on Soil Biochemistry" (Diane E. Stott, USDA-ARS National Soil Erosion Research Laboratory), and "Applying Dynamic Agricultural System Concepts to Meet Future Challenges to Soil and Water Conservation" (Dr. Jon Hanson, Supervisory Rangeland Scientist). The symposium was moderated by Dr. Mark Liebig, USDA-ARS Soil Scientist. An audience of 100-110 attended the scientific symposium. Publication of these symposium papers will be forthcoming in *Agronomy Journal*. Dr. Al Frank, Plant Physiologist and USDA-ARS Collaborator also presented, "Intra Seasonal Net Ecosystem Flux Dynamics of Crop and Grassland" in another session at the ASA-CSSA-SSSA International Meeting. USDA-ARS scientists from Mandan authored and/or co-authored 37 papers for this annual international scientific meeting.

USDA-ARS Scientists Focus On Carbon Above and Below Ground

On November 7th, Agricultural Research Service scientists from Mandan, ND supported the educational efforts of the North Dakota Association of Soil Conservation Districts by highlighting their educational program. Dr. Rebecca Phillips (Plant Physiologist) presented: "Above ground Carbon Flow – Surface to Space Connection" and Dr. Kris Nichols (Soil Microbiologist) presented: "Below ground Carbon Flow – The Glomalin Connection" to an audience of approximately 100 conservation leaders from throughout the state.